

MISSOURI CONSERVATIONIST

A large yellow bass is captured mid-leap, its mouth wide open as it chomps down on a bright orange and yellow lure. The fish is set against a background of brown, rippling water. The title 'MISSOURI CONSERVATIONIST' is overlaid in large, white, sans-serif letters across the top half of the image.

VOLUME 83, ISSUE 6, JUNE 2022
SERVING NATURE & YOU

WE WANT TO HEAR FROM YOU



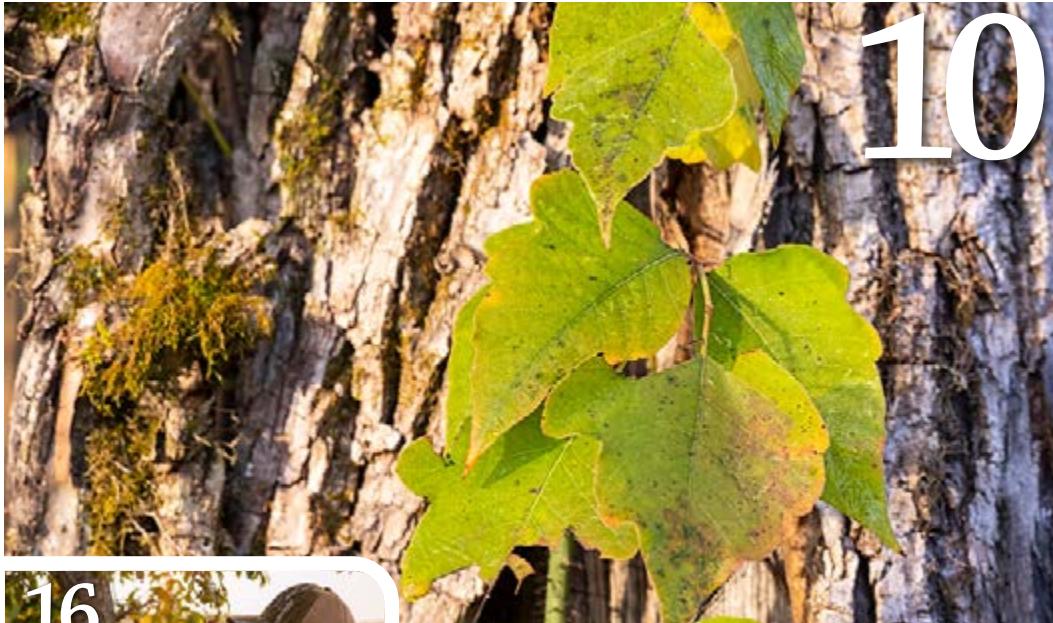
To better understand our readers and deliver the best content, we need to hear from you! Please take a few minutes to respond to the 2022 *Missouri Conservationist* reader survey. Scan the QR code with your smartphone or visit short.mdc.mo.gov/4w8. The survey should only take approximately 5 minutes.



Contents

JUNE 2022
VOLUME 83, ISSUE 6

10



FEATURES

10 Poison Ivy

An irritating plant with wildlife benefits.

by Jessica Marie Baumgartner

16 Managing the Herd

Program helps landowners address deer damage, improve herd structure.

by Larry Archer

22 Your Summer Highlight Reel

From walleye to smallmouth and catfish, Missouri waters offer action you won't want to miss.

by Tim Kjellesvik



DEPARTMENTS

- 2 Inbox
- 3 Up Front With Sara Parker Pauley
- 4 Nature Lab
- 5 In Brief
- 28 Get Outside
- 30 Places To Go
- 32 Wild Guide
- 33 Outdoor Calendar



Monarch caterpillar on butterfly milkweed

MISSOURI
CONSERVATIONIST



ON THE COVER

Smallmouth bass

© NOPPADOL PAOTHONG

10–20mm lens, f/8
1/200 sec, ISO 800

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Inbox



Letters to the Editor

Submissions reflect readers' opinions and may be edited for length and clarity. Email Magazine@mdc.mo.gov or write to us:

MISSOURI
CONSERVATIONIST
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BLACK WIDOW

I really enjoyed *Black Widow* [March, Page 16]. For such an iconic spider, I learned how little I knew, especially that we have two species and the differences between males and females. Thank you for an informative and intriguing article.

August Herries
via email

BENEFITS OF NATURE

I found the April issue particularly interesting from the start. The benefits of doing things outdoors have many benefits as you stated and is the perfect environment for kids and adults alike. Nothing beats a day in the woods just to connect with the beauty of God's creation and to get away from the distraction of electronic devices — something we all need these days. Keep up the good work.

Doug Scheidegger via email

ENJOYING CONSERVATION

The *Missouri Conservationist* has blossomed in the past months, and I want you to know how much I am enjoying it. So many informative articles about animals, plants, or trees and telling us how to study and enjoy them.

I love seeing the photos taken by my neighbor, Noppadol Paothong, too.

Laura Wells Columbia

Missouri Conservationist's string of recent monthly issues that promote the well-being of nature, birds, plants, and wildlife in Missouri has not gone unnoticed. The magazine, in focusing on educating readers on the protection of species, species' habitats, and behaviors, and all of the positives that nature has to offer, does a tremendous service for genuine conservation and the residents of

this state. It is also noted that the appointment of Margy Eckelkamp as a Missouri conservation commissioner has made a marked improvement in moving Missouri forward to a more contemporary perspective on all things conservation.

Bradley Sinclair Wildwood

FOR THE LOVE OF SNAKES

A few weeks ago, my son spotted a black snake (western ratsnake), sunning on our deck. I was raised to kill all snakes, but I know these guys aren't a threat. My son suggested we relocate him to the subdivision lake. We did, and we've seen him a few times, not far from where we dropped him off. It's almost like he comes out to greet us.

Brandon Baker St. Charles



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Send a note using our online contact form at mdc.mo.gov/commissioners.

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The Missouri Department of Conservation protects and manages the fish, forest, and wildlife of the state. We facilitate and provide opportunity for all citizens to use, enjoy, and learn about these resources.



**Want to see your photos
in the Missouri Conservationist?**

Share your photos on Flickr at flickr.com/groups/mdcreaderphotos-2022 or email Readerphoto@mdc.mo.gov.

**1**

1 | Little blue heron fishing by **Kurt Kirchmer**, via Flickr

2 | Swallowtail on bee balm by **Rick McLain**, via Flickr

3 | Fishing neighborhood pond by **Lindsey Sommer**, via email

**2****3**

**Want another chance to see
your photos in the magazine?**

→ In the December issue, we plan to feature even more great reader photos. Use the submission methods above to send us your best year-round pictures of native Missouri wildlife, flora, natural scenery, and friends and family engaged in outdoor activities. Please include where the photo was taken and what it depicts.

TAYLOR LYNN PHOTOGRAPHY



Up Front

with Sara Parker Pauley

✖ My dearest friend since high school days loves a good garage sale. Nothing makes her happier than finding hidden treasures in what others would see as castaway clutter. Walking the seashore with her is the same. She has the eye to spot just a sliver of a perfect seashell peeking through layers of sand. She proves that treasure is all around for those who take the time to venture out and keep a watchful eye.

Last June as the summer temperatures began to make their ascent, my husband and I took our fifth wheel travel trailer and bass boat in search of hidden treasure — largemouth bass. We hadn't yet explored northwest Missouri's flat-water areas, so we decided it was well past time to do so. Anchoring out of Crowder State Park, our treasure map included Lake Paho Conservation Area, and city lakes in Hamilton, Bethany, and Unionville. We lured in our treasure trove of fish with topwater poppers, frogs, and shaky head worms, among others.

I even took a break from the heat one afternoon and ventured into the quaint community of Jamesport, finding treasures there of a different kind.

Summer is the ideal time to go in search of Missouri's hidden jewels — especially those of the fin variety, be they wall-eye, crappie, bass, or catfish. (See MDC's treasure map of summer fishing fun on Page 22). In nature, treasure is everywhere, if we can find the eye to see and the willingness to behold.

SARA PARKER PAULEY, DIRECTOR
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Nature LAB

by Dianne Van Dien

Each month, we highlight research MDC uses to improve fish, forest, and wildlife management.

BIRD CONSERVATION

Brown-Headed Nuthatch Restoration

In the fall of 2021, MDC and partners relocated 56 brown-headed nuthatches from Arkansas to the Mark Twain National Forest in southern Missouri, completing phase two of a restoration project.

A few historical records place brown-headed nuthatches in Missouri in the late 1800s and early 1900s, but none are recorded after that time — likely due to the loss of shortleaf pine forests from logging operations. When the U.S. Forest Service restored the pine habitat over the last 30 years, a diversity of woodland birds moved in, but no brown-headed nuthatches. “Brown-headed nuthatches are nonmigratory and are not long-distance dispersers,” says former State Ornithologist Sarah Kendrick.

So, a multi-agency team of biologists devised a plan to capture nuthatches in Arkansas, where their population is healthy, and relocate them to the restored pine habitat in Missouri’s Ozarks. Forty-six were moved in 2020. These birds handled the transition well, as have the 56 birds that were moved in 2021.



Color band

Radio tag

Researchers fit brown-headed nuthatches with radio tags and color bands before releasing the birds in Missouri’s Mark Twain National Forest.

L to R: Kristen Heath (University of Missouri), Amanda Heltzel (MDC), Sarah Kendrick (former state ornithologist).

Biologists monitor the progress of reintroduced brown-headed nuthatches

Half of the nuthatches from each group were fitted with radio tags so biologists could track their survival. The tags’ tiny batteries lasted only for a month, so biologists now monitor the nuthatches monthly with two-person teams who look and listen for the birds. “Every bird was fitted with a metal federal band as well as unique color bands so we can tell which individuals we’re resighting,” explains Kendrick. “We use binoculars and a camera to confirm the color bands.”

While initial results are promising, long-term success hinges on maintaining the pine woodlands through forest thinning and prescribed fire. “The Mark Twain National Forest managers worked hard to put the habitat on the ground,” says Kendrick. “Their work has paid off, and partners were able to bring back this species.”

Brown-Headed Nuthatch Restoration at a Glance

Restoration Numbers

- 46 nuthatches relocated in fall of 2020
- 56 nuthatches relocated in fall of 2021
- 6 nests located and monitored in summer 2021

Partners:

- U.S. Forest Service Northern Research Station
- Missouri Department of Conservation
- University of Missouri
- Ouachita National Forest (AR)
- Mark Twain National Forest (MO)
- Tall Timbers Research Station (FL)
- Arkansas Game and Fish Commission
- Central Hardwoods Joint Venture
- U.S. Fish and Wildlife Service



Brown-headed nuthatches depend on pine woodland habitat, where they forage high in the treetops. These tiny birds weigh 10 grams (slightly less than an Oreo cookie) and are known for their *squeaka* vocalization that resembles the sound of a rubber ducky.

To learn more about the restoration efforts, visit *The Squeak is Back* at short.mdc.mo.gov/436.

In Brief

News and updates from MDC



FREE FISHING DAYS

GET HOOKED ON FISHING JUNE 11 AND 12

➤ Conservation makes Missouri a great place to fish. MDC invites everyone to experience it during Free Fishing Days, June 11 and 12. Anyone may fish in the Show-Me State during this time without buying a fishing permit, trout permit, or trout park daily tag. Free Fishing Days is an annual MDC event that takes place statewide during the Saturday and Sunday following the first Monday in June.

All other fishing regulations remain in effect during Free Fishing Days, such as limits on

size and number of fish an angler may keep. Special permits may still be required at some county, city, or private fishing areas. Trespass laws remain in effect on private property.

Fishing permits are required before and after June 11 and 12 unless an angler is exempt by age or other factors.

Learn more about fishing in Missouri at mdc.mo.gov/fishing.

For information on Missouri fishing regulations, fish identification, and more, get a copy of the *2022 Summary of Missouri Fishing Regulations* booklet where permits are sold or online at short.mdc.mo.gov/Z9n.

Our free MO Fishing app can help anglers find the best places to fish in Missouri, access regulation information, identify fish by species, and more. Anglers can also buy, store, and show fishing permits right on their mobile devices. MO Fishing is available for download through Google Play for Android devices or the App Store for Apple devices. Learn more at short.mdc.mo.gov/ZJZ.

Want to learn to fish?

MDC's Discover Nature —Fishing program provides a series of free lessons throughout the state. All fishing gear is provided. Learn more at short.mdc.mo.gov/Zty.

Need fishing gear?

We work with numerous libraries and other locations around the state to loan fishing gear for free. Find Rod and Reel Loaner Program locations at short.mdc.mo.gov/ZVc.

In Brief



APPLY FOR MANAGED DEER HUNTS

Beginning July 1, deer hunters can apply online for an opportunity to participate in more than 100 managed deer hunts throughout the state this fall and winter.

MDC offers managed deer hunts for archery, muzzle-loading, crossbow, and modern firearms from mid-September through mid-January at conservation areas, state and other parks, national wildlife refuges, and other public areas. Some managed deer hunts are held specifically for youth or for people with disabilities.

The managed deer hunt application period is July 1-31. Hunters are selected by a weighted random drawing. Draw results will be available Aug. 15 through Jan. 15. Applicants who are drawn will receive area maps and other hunt information by email, or mail if an email address is not located on the customer's account.

Get more information on managed deer hunts, preview hunt details, and apply starting July 1 at mdc.mo.gov/managedhunt.

Details about managed hunts can also be found in the *2022 Fall Deer & Turkey Hunting Regulations and Information* booklet, available starting in early July at MDC offices and nature centers, from permit vendors around the state, and online at mdc.mo.gov.

DOING A PRESCRIBED BURN? LOG YOUR BURN

MDC and the Missouri Prescribed Fire Council (MPFC) encourage landowners, land managers, and others who conduct prescribed burns on private land to "log your burn" through the MPFC website at moprescribedfire.org.

Prescribed fire, or controlled burning, is an affordable and effective management tool to accomplish land management goals, including reducing fuel loads to lessen the chance and intensity of wildfire; restoring native plant communities; enhancing wildlife habitat for wild turkeys, deer, and other game species; improving livestock forage production; regenerating trees; and controlling invasive species such as bush honeysuckle.

Visit the MPFC website at moprescribedfire.org to log your burn. This is a voluntary and anonymous entry for prescribed burns completed on private land in Missouri.

Learn more about log your burn and using prescribed fire from MPFC at moprescribedfire.org and MDC at short.mdc.mo.gov/Zrf.

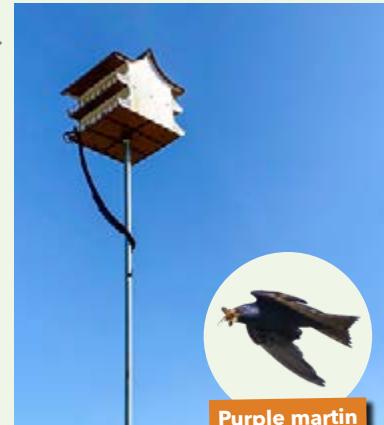
Ask MDC

Got a Question for Ask MDC?

Send it to AskMDC@mdc.mo.gov or call 573-522-4115, ext. 3848.

Q: How can I keep snakes out of my purple martin birdhouse?

→ Your best bet may be to install a stove-pipe baffle. These predator guards are helpful in preventing pole-climbing predators — such as snakes, raccoons, or squirrels — from eating purple martins' eggs and young. You can read more about predator guards and how to make one at short.mdc.mo.gov/4w5 and short.mdc.mo.gov/4wS.



Purple martin

can detect ultraviolet light that may be reflected off insects or flowers.

The saying "blind as a bat" is a bit of a misconception; bats are sensitive to their environment whether they are using sight or not.

Q: We have many cardinal pairs at our feeder, but this year we noticed a behavior not previously seen. The male was picking up seeds from the ground and putting them into the female's mouth. What was happening here?

→ This is a courtship behavior between the male and female. Courtship feeding may be more than merely ceremonial or help with pair-bonding. Scientists think it provides the female with significant nutritional



Eastern tiger swallowtail caterpillar

benefits at a time in her life when the number of eggs she's able to produce, and the total weight of the clutch, is related to her health status. Courtship feeding is also a way to induce copulation and reduce aggression between the sexes. And, by keeping a female mate healthy, it's a way for the male cardinal to increase his own reproductive success.

Q: Is this an eastern tiger swallowtail caterpillar? Aren't they bright green, though?

→ Yes, it is an eastern tiger swallowtail caterpillar (*Papilio glaucus*). Like most other caterpillars, it has changed to a darker color because it is finished feeding and is seeking a location to pupate. Some scientists think caterpillars change color during this time to avoid predation. When these caterpillars are feeding on green leaves, bright green is better camouflage; when they are walking on tree limbs or the ground in search of a place to pupate, a duller earth-tone provides a higher degree of safety.

What IS it?

Can you guess this month's natural wonder?

The answer is on Page 9.



Dylan Bollig

HICKORY COUNTY
CONSERVATION AGENT

offers this month's

AGENT ADVICE

With warm, sunny days of summer finally here, it's a great time to plan a weekend jug line fishing trip. Various species of catfish are typically the target for this method. Remember, all jug lines must be labeled with either the angler's full name and address or conservation ID number. Anchored jug lines may not be left unattended for more than 24 hours. Unanchored jug lines must be personally attended at least once per hour, but at all times in streams. Remember, remove all jug lines when finished to keep Missouri waterways clean. Fishing with jug lines is a great way to introduce young people to an exciting new way of fishing that's sure to create a lifetime of family memories. For more information, visit *A Summary of Missouri Fishing Regulations* at short.mdc.mo.gov/Z9n.

INVASIVE SPECIES

MISSOURI'S LEAST WANTED

Invasive nonnative species destroy habitat and compete with native plants and animals. Please do what you can to control invasive species when you landscape, farm, hunt, fish, camp, or explore nature.

Hydrilla

Introduced in the early 1950s likely through the aquarium trade, hydrilla (*Hydrilla verticillata*) is a submerged aquatic plant native to the Indian subcontinent. Federally listed as a noxious weed, it is known to harm aquatic resources, choking out local plant communities, interfering with boating and fishing, clogging water intake systems, and adversely changing the dynamics of fish populations. Hydrilla can also spread disease to waterfowl and raptors.

Why It's Bad

Hydrilla can live in any size or type of freshwater. It can quickly spread through ponds, lakes, reservoirs, and even streams. Experts have labeled it the "perfect weed" due to its persistence and multiple methods of propagation, including fragmentation, tubers, turions, and seed dispersal. It only takes one small piece of the plant to start new growth. Hydrilla can be spread by:

- Hitching a ride on boat trailers, fishing gear, waterfowl, and wildlife
- Tubers being swallowed by waterfowl and dropped in new locations
- Wildlife and humans relocating fish and plants from infested waters
- Aquarium dumping



Hydrilla is a submerged, rooted plant that can live in any size or type of body of water. It needs very little light and grows in areas where many native aquatic plants cannot.

How to Control It

Once established, hydrilla is difficult to eradicate. It takes at least seven years of successful, season-long control to rid a site of hydrilla. In most cases, control means several applications of aquatic herbicides throughout the growing season each year. This process can get expensive. Prevention is crucial. Please take the following precautions to prevent the spread of hydrilla:

- **Clean:** When leaving a body of water, remove all mud, plants, fish, or animals before transporting your equipment. Thoroughly clean all fishing gear, including boats and trailers after each trip.
- **Drain:** Eliminate any water from your equipment before leaving the area you visited. Always drain water from boats, motors, live wells, etc.
- **Dry:** Dry anything that comes in contact with water.
- **Dispose:** Place unwanted aquatic plants in the trash.

When introducing any new plants to a body of water, thoroughly rinse the roots of any attached soil, debris, and vegetation prior to planting. Place all removed material in the trash.

For more information, visit short.mdc.mo.gov/43n



MAKE A SPLASH THIS FROGGING SEASON

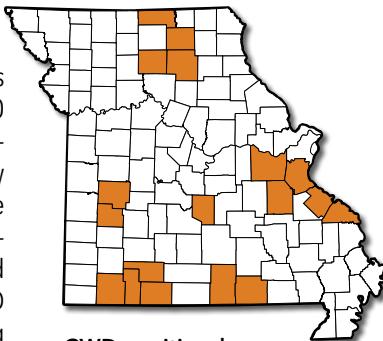
Discover nature this summer during frogging season. Beginning June 30 at sunset through Oct. 31, those with a fishing permit or small-game hunting permit may frog for bullfrogs and green frogs. Learn more at short.mdc.mo.gov/4UL.

The fun does not have to end after catching frogs. Be sure to browse tasty recipes at short.mdc.mo.gov/Zxz.

Buy Missouri hunting and fishing permits from numerous vendors around the state, online at mdc.mo.gov/permits, or through our free mobile apps, MO Hunting and MO Fishing, available for download through Google Play or the App Store.

FINAL CWD RESULTS

MDC staff and volunteers sampled more than 32,000 deer for chronic wasting disease (CWD) between July 2021 and April 2022. More than 18,700 of the 32,000-plus deer tested were sampled as part of mandatory CWD sampling during the opening weekend of the November portion of the 2021 firearms deer season.



CWD-positive deer detected during the 2021-2022 sampling season.

MDC confirmed that 86 of the more than 32,000 deer sampled tested positive for CWD. CWD-positive deer were detected in 18 counties: Adair (2), Barry (4), Cedar (2), Christian (2), Franklin (6), Howell (1), Jefferson (12), Linn (12), Macon (10), Oregon (6), Perry (2), Pulaski (1), Putnam (1), St. Clair (1), Ste. Genevieve (15), Stone (6), Taney (2), and Washington (1). Detections in Barry, Christian, Howell, and Washington counties marked the first detections of the disease in these counties.

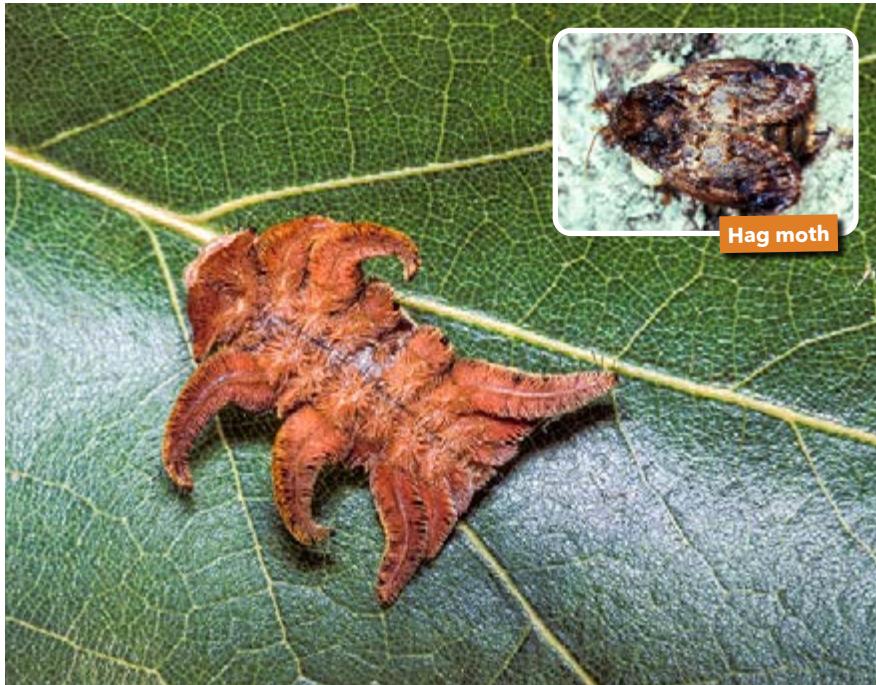
Of the more than 32,000 deer sampled, about 3,000 were collected through MDC's targeted culling partnerships with many landowners in localized areas where CWD has been found.

MDC thanks the many hunters, landowners, taxidermists, and meat processors around the state who helped with CWD sampling efforts.

Learn more at mdc.mo.gov/cwd.

WHAT IS IT? MONKEY SLUG CATERPILLAR

Monkey slug caterpillars may just be the proverbial ugly ducklings of the natural world. These hairy caterpillars will transform into hag moths. They have six hairy arms, curling out from each side, and come in a variety of colors. The hairs and arms break off, causing a nasty rash when touched. As they grow to reach about 1 inch, they lose their carpetlike skin. Monkey slug caterpillars reside amongst deciduous trees and shrubs they consume.



Poison IVY

AN IRRITATING PLANT WITH WILDLIFE BENEFITS

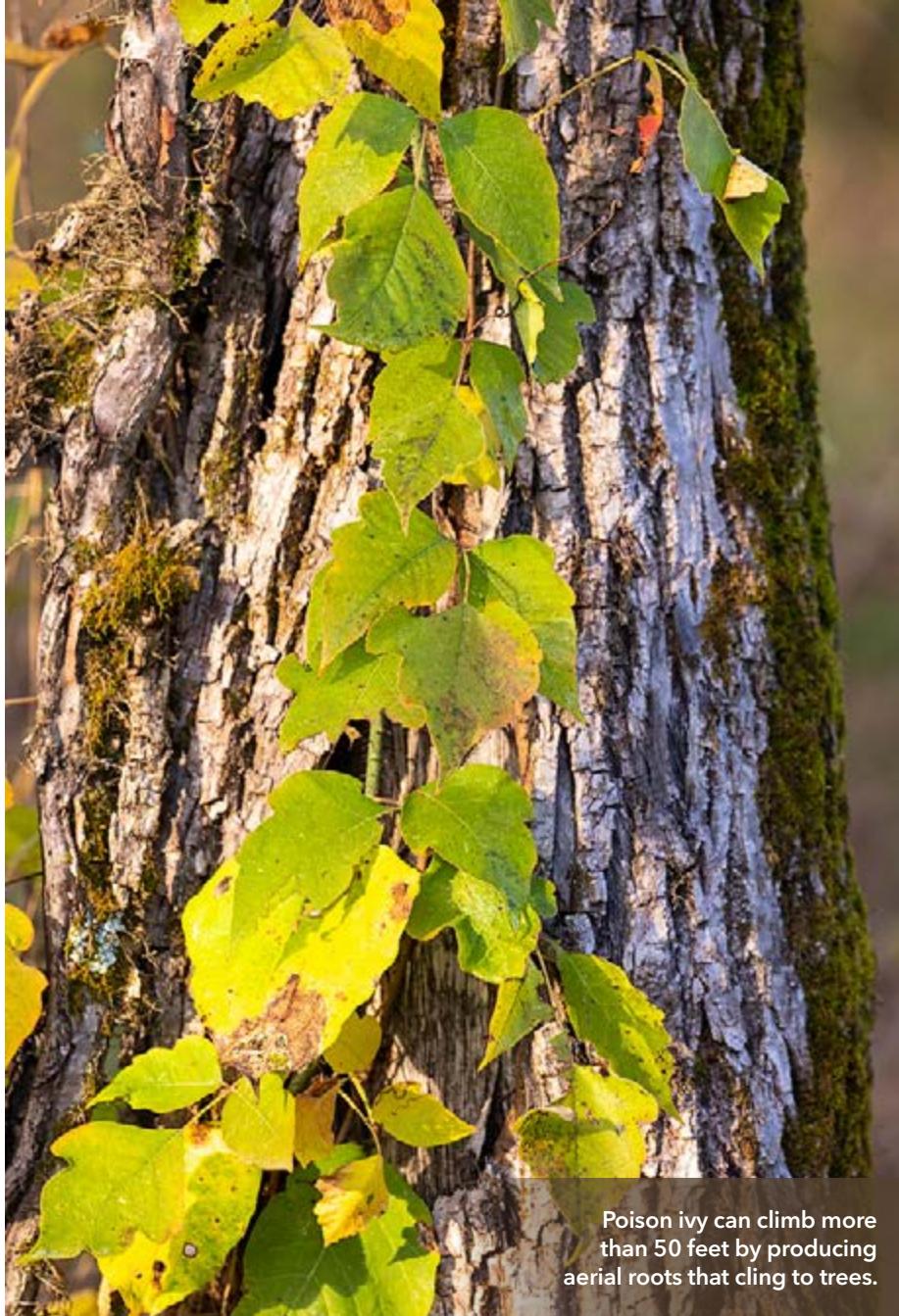
by Jessica Marie Baumgartner

I love hot sticky weather. There is nothing like the feel of the sun beating down on my skin as I sip water before a long hike through a forest.

Unfortunately, a plant that I'm highly allergic to grows best in this weather. I get itchy just thinking about it.



PHOTOGRAPH BY
NOPPADOL PAOTHONG



Poison ivy can climb more than 50 feet by producing aerial roots that cling to trees.

Most people in the United States have heard of poison ivy (*Toxicodendron radicans*). While not uncommon, it's more prominent in the Midwest and eastern areas. Being born and raised in Missouri, I was immune to it all throughout my childhood. I could run through the woods scraping my knees without one single bump. Not a rash to be seen.

Adulthood is another story. In my early twenties, I had one bad reaction to poison ivy and since then I have become severely allergic to this beautiful plant. I don't know how it happened or what caused my immune system to change so drastically, but it did and now I have to

work hard to keep enjoying the trips to the forests I adore.

Beyond the Itch

Being a nature lover, I like to look at the entire picture. Instead of cursing the oily leaves of poison ivy, I set aside my discomfort for education. Poison ivy has many benefits. These are not widely discussed because the focus is on the intense skin rash it causes for a large percentage of the population. It swells. It itches. It throbs. It seeps and oozes. It looks like a biblical plague.

But if we ignore the oily urushiol that causes breakouts, and examine the plant

behind the scratching, it is possible to not only see vegetation and cover for wildlife populations, but also a beautiful green vine.

It grows in abundance. It offers shelter and protection for insects and small mammals. It provides shade and climbs easily. It is a strong hearty plant. These are all great attributes in nature.

Birds, insects, and animals have immunities to the reactions humans often suffer thanks to their close relationship with it. Feathers, exoskeletons, and fur protect their bodies and the leaves, flowers, and berries are a tasty treat for deer and other herbivores.

ID is Key

Identifying poison ivy is most important. When I spot it on the trail, I can keep my distance.

The saying, "leaves of three, let them be," is helpful. However, just sticking to this mantra can be deceiving.

Box elder, fragrant sumac, eastern poison oak, and even poison sumac or Virginia creeper often mimic the characteristics of poison ivy. These species have three leaves at times, but those with berries host colorful hairy fruit instead of the white waxy variety you will find on poison ivy. The stems, stalks, and heights they climb are also very different from the real thing.

According to MDC's *Field Guide*, *Toxicodendron radicans* is best described to have three leaves of variable size and shape. The end leaf is at the center with two uneven ones on either side. These leaves take on different textures and hues throughout the year. They are small and green in the spring but grow throughout the summer and then turn red, orange, and yellow in the fall.

The stems are light brown and hairy, with raised pores. They climb by aerial rootlets and the stems trail until they find support to climb up. Without support, they take on a shrub-like structure with single stems.

From May to June, poison ivy sprouts greenish-white flowers in fragrant clusters of 1–4 inches. Between August and November, white waxy round berries ripen in grapelike clusters.

Box elder**Fragrant sumac****Poison oak****Virginia creeper**

Numerous bird species eat poison ivy berries, including sparrows, woodpeckers, wrens, and more.

Yellow-rumped warbler

To properly spot poison ivy, there are some key identifiers to look for:

- A woodlike vine that often has shrublike habitat or climbs up fences, poles, trees, etc.
- Three leaves: one end/center and two side leaflets with unequal proportions
- The end leaf at the center has a stalk of about $\frac{1}{2}$ - $1\frac{1}{4}$ inches long which is longer than the stalks on the other two leaflets.
- Reddish tinge in spring; mostly green in summer; red, orange, or yellow in the fall
- Waxy white berries (not fuzzy)
- Loose, drooping flower and fruit clusters that arise from leaf bases along the stems
- Can reach as high as 60 feet, often in trees



Poison ivy can take over large spaces. Removing some is best done at the outer reaches. Removing all will be a multiple season project.

Maintaining it in Large Spaces

When I bought my home a few years ago, the yard was completely overgrown. I didn't notice the huge poison ivy vines choking some of the trees in the back corner. Many homeowners don't realize how easily poison ivy spreads. If you have space, leaving it for wildlife is beneficial to ecosystems, but it is not easy to contain. In older neighborhoods, like mine, poison ivy grows everywhere. It's not easy to remove or contain, but proper disposal was a necessity for me.

Removing it safely is just as important as identifying and avoiding contact. In the past, people have tried burning it, but this can lead to severe lung infections because it becomes airborne. There are plenty of sprays available, but in my experience many of them only kill the leaves and it comes back.

Digging poison ivy out by the roots and cutting it up for personal or city/county composting has helped with the smaller vines that form in the early stages of growth. For older, thicker vines

like the main ones I found in my backyard, professional poison ivy control may need to be contacted.

When the poison ivy control service came to my house, he said the vines in our trees were some of the oldest he'd ever encountered. He sawed through the base of the root and poured a poison ivy killing chemical directly into the source.

I was warned that a few sprouts would pop up the next year and would need to be removed. Because I prefer more natural means, I found that spraying the plant with vinegar, then dumping boiling water on it instantly kills poison ivy and makes it much safer for me to dig out the roots without a reaction.

In more rural areas, goats may have their own important role in keeping poison ivy breakouts at bay. They eat it in abundance and are the best known natural removal service. It's a win/win for people and animals.

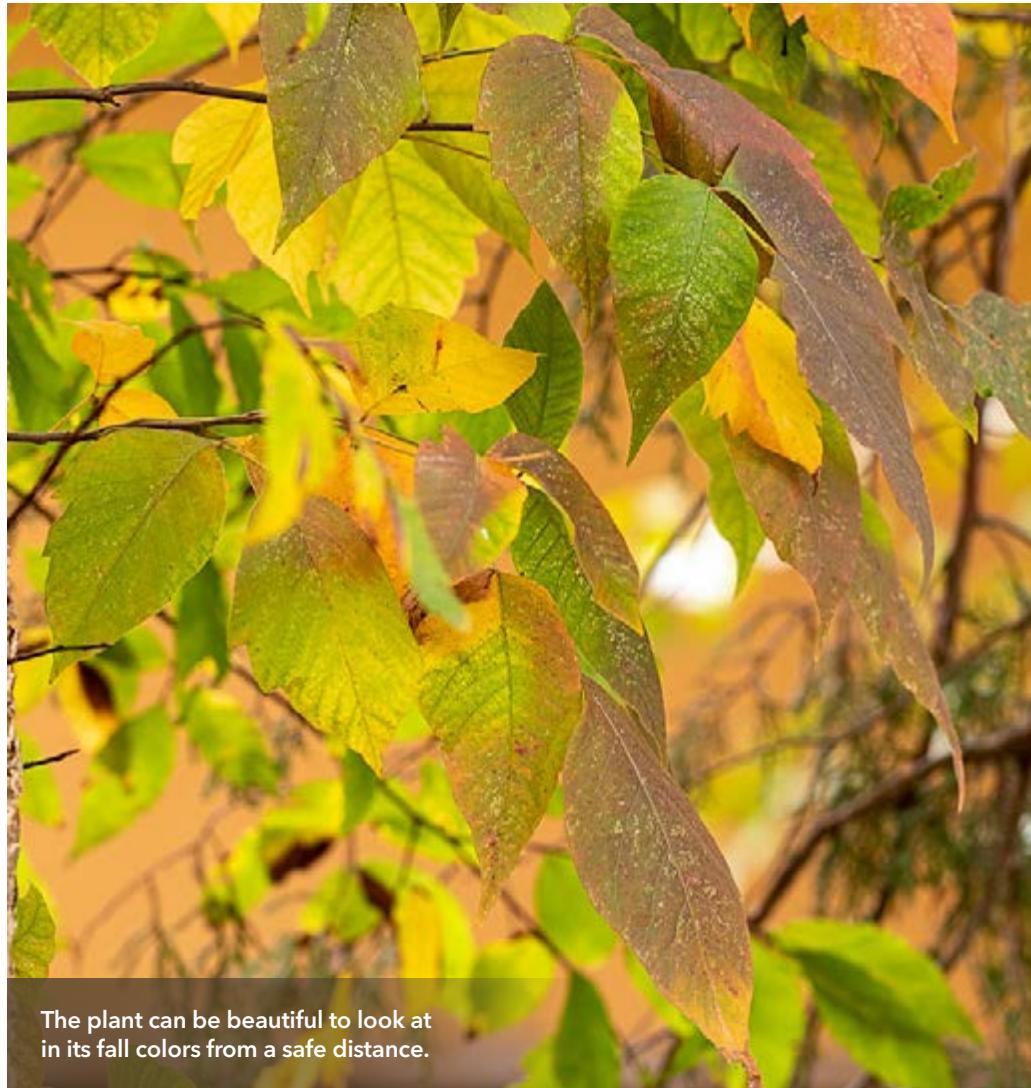
First Aid for Breakouts

After coming in contact with poison ivy, it is important to scrub it off in a cold/lukewarm shower to remove any





Young poison ivy leaves look shiny or waxy.



The plant can be beautiful to look at in its fall colors from a safe distance.

residue that may have soaked into the skin. Never underestimate the healing power of water but avoid hot water as that spreads rashes. There is nothing like a cool rush of water to ease a reaction and soothe itching.

If a rash does occur, oatmeal baths, cold compresses, and anti-itch cream will ease the effects. A simple at-home cream can be made by mixing 3 teaspoons of baking soda with 1 teaspoon of water. Oral antihistamines can help, or for a more holistic approach, apple-cider vinegar may be applied to the skin for pain relief and to reduce redness.

Severe swelling, fever, difficulty breathing, or spreading to the face, eyes, lips, and other areas are extreme reactions that require medical care. These are all symptoms of a poison ivy allergy.

There are studies that examine the possibility that drinking goat's milk helps people build a tolerance to urushiol. Unpasteurized is considered the most medicinal, but I have benefitted from drinking pasteurized goat's milk during the hot summer months to keep my skin safe.

For any vegans or those who abstain from goat byproduct, there is another potential aid: mangoes. Mangoes contain urushiol. The theory is that eating small quantities of mangoes helps put just enough of this chemical into one's system that the body builds immunity. I have tested it and can attest that the more mangoes and goat cheese I eat, the less poison ivy affects me. It is always best to talk with your doctor before taking these routes, but they hold some merit within the medical community.

Taking a scientific view of poison ivy makes it seem like less of a threat. Yes, it can cause harmful irritations, but that is due to the chemical compounds of the oil it secretes. It is not acid. It is not a

poison. It is a living plant doing its best to survive and procreate, like everything in this world.

Poison ivy has its place in nature. We can coexist and minimize the ill-effects with proper caution, care, and removal.

▲

Jessica Marie Baumgartner is a homeschooling mother of four. She is the author of The Magic of Nature, a current member of the Missouri Writers Guild, and staff writer for Evie magazine and Go 2 Tutors. Her work has been featured by The St. Louis Post Dispatch, Woods Reader Magazine, Chicken Soup for the Soul, and many more.



MANAGING THE HERD

PROGRAM HELPS LANDOWNERS ADDRESS DEER DAMAGE, IMPROVE HERD STRUCTURE

by Larry Archer | photographs by David Stonner



M

any Missourians have a “too many deer” story, often involving a smashed bumper or shattered windshield, but Cape Girardeau resident Mark Lanzotti had deer eating away at his options for managing his southeast Missouri property.

An attorney by day, Lanzotti owns acreage in Bollinger County that is split between row crops and land enrolled in programs aimed at improving wildlife habitat. For years, Lanzotti leased out approximately 100 acres for row crops, but regular damage from the local deer herd ate into the area’s productivity. Eventually, finding a farmer interested in planting the area became difficult, Lanzotti said.

“I can’t keep a farmer on my farm because he can’t grow soybeans,” he said. “The first 30 yards of the field around the edges looks like we took a weed whacker to it.”

Keeping those fields in production plays an important part in the programs Lanzotti participates in to help maintain and improve habitat on the remaining acreage, including 25 acres recently dedicated to monarch habitat. Attempting to farm the property himself — in addition to maintaining his law practice — is a short-term fix, with the real solution being addressing the deer that are doing the damage.

Out of Balance

About as far away as one can get from Lanzotti’s Bollinger County property and still be in Missouri, Mark Drury is dealing with his own deer issues. Drury, co-founder of the hunting and outdoor media company, Drury Outdoors, and several neighboring landowners own and manage more than 4,000 acres north of Princeton along the border with Iowa. In his case, the issue wasn’t a matter of too many deer, but a herd that was out of balance between does and bucks.

“It was out of control from our perspective,” Drury said. “There’s a lot of gun pressure up in northern Missouri, a lot of bucks getting harvested, obviously, and just not a lot of does getting harvested. I mean, we’ve got does like you’ve never seen.”

While the nature of their deer issues differed, both Lanzotti and Drury — frequent collaborators with MDC on habitat and wildlife issues — were eager to be a part of the new Deer Management Assistance Program (DMAP), which was rolled out on a limited basis in 2019.

Birth of DMAP

DMAP was developed to help landowners meet their personal deer management goals on their property, such as reducing damage to crops or habitat, or achieving recreational deer management goals, such as balancing the ratio of female to male deer, said MDC Private Lands Deer Biologist Kevyn Wiskirchen.

“Specifically, the program provides more flexibility with firearms antlerless harvest opportunities that can be used to meet a broad suite of deer management goals,” Wiskirchen said.

Participants in DMAP can obtain special DMAP firearms antlerless tags based on the nature and size of the issue that don’t count toward the season bag limit, he said.

“That’s a population control mechanism used with deer management,” he said. “When you need to bring the population down for whatever reason — if you’ve got a growing deer population or an overabundance of deer — your best approach is to focus on harvesting more females because they are the producers of the population.” While Missouri landowners can already obtain permits to harvest some female deer on their property, it’s not always enough to keep the population in check in certain parts of the state or on certain properties. DMAP makes up the difference so that deer population goals can be achieved.

Initially rolled out in 2019 to just seven counties — four in southeast Missouri and three in central Missouri — DMAP has expanded each year and is now available statewide for the first time this year. In 2021, nearly 90 landowners enrolled approximately 86,200 acres in the program.

A deer herd that is out of balance with its habitat can do significant damage to crops.





Bollinger County landowner Mark Lanzotti (above left) discusses deer-related crop damage with Private Lands Conservationist James Borowiak and Conservation Agent Jeff Scott.

Making the Case

Participation in the program is not guaranteed, as applicants must provide evidence of either the crop damage resulting from deer or the imbalance in the deer herd. The program also requires at least 500 acres to enroll, which can be made up of several landowners with property near one another. Combining properties benefits the landowners who work together to meet common deer management goals.

For Lanzotti, making the case was easy, as he had developed a long-time relationship with local MDC professionals who were familiar with his property and issues.

"We had a long working relationship with both our conservation enforcement folks and our private lands conservationists," he said. "So, both of them were able to watch that herd growth occur, and subsequent destruction occur."

"So yes, we just documented the row crop damage for them. But we also had the benefit of participating in some herd surveys through the years, which demonstrated what we were seeing in the field."

Participation in DMAP depends on the landowner demonstrating the nature of the issue.

"For properties that want to primarily manage damage to crops and other plant communities, the landowner will schedule a time with their local conservation agent to visit the property and assess the damage. Properties that are more interested in recreational deer management have to collect some type of population survey data to qualify for the program," Wiskirchen said. "I use that information to make an informed harvest recommendation, so once they have collected the data and they have an estimate of abundance and the sex ratio, I can make a harvest recommendation to put them on track toward their goals."

While crop damage may be self-evident, demonstrating imbalance in the doe-to-buck ratio takes a little more detailed study. To make his point, Drury conducted a survey of the deer population on his property using trail cameras. The extent of the imbalance between does and bucks shown in the photographs was significant, Drury said.

"In some of the trail camera pictures we have, there will be 15, 20 does on a food plot and one or two bucks, so there are some great photos to kind of show that our herd was really out of balance," he said.

Getting Enrolled in DMAP

The Deer Management Assistance Program (DMAP) is designed to assist landowners with their deer management goals through additional harvest opportunities.

DMAP is available to qualifying landowners of properties of at least 500 acres located outside of cities or at least 40 acres within a city's boundaries. Although owners of smaller properties also deal with deer issues, the acreage requirement is designed to encourage deer management at a scale that will have a meaningful effect on local populations. Neighboring landowners can combine their properties as part of the application process in order meet the minimum property size requirement. Separate properties must be within ½ mile of another enrolling property to combine.

Landowners wishing to enroll a property to address deer damage must first have the damage verified by their local MDC conservation agent or wildlife damage biologist. MDC contact information may be found at mdc.mo.gov/contact-engage. If the damage is determined to be caused by deer and that DMAP enrollment is warranted, the agent or biologist will authorize the number of permits that will be available for use on the property during the deer season and assist the landowner in beginning the application process.

Landowners seeking to achieve recreational deer management goals should contact MDC Private Lands Deer Biologist Kevyn Wiskirchen at Kevyn.Wiskirchen@mdc.mo.gov. Landowners will be asked to collect deer population

data prior to enrollment that can be used to determine eligibility and the number of DMAP permits that will be available. Trail camera surveys and observation data are the most common sources for estimating the herd's composition.

The annual DMAP enrollment period extends from May 15 through October 1. All properties, even those that have been previously enrolled, must be enrolled annually. More information on the DMAP application process, how additional DMAP permits are allocated, and how to estimate deer populations with trail cameras, observations, and harvest data is available online at mdc.mo.gov/dmap.





Progress ... One Year at a Time

Being qualified for DMAP is not necessarily a permanent state. Some properties may be able to get the population where they want it within a year or two and no longer have a need to re-enroll. For others, it may take more time or may be needed long-term to maintain the deer herd. Those wanting to remain in the program must reapply annually and demonstrate the damage or imbalance, Wiskirchen said.

"So, after the first year, they're collecting observation data where they just record what they see while they're in the tree stand and the number of hours they hunted," he said. "And from that I can track where the population is going from that first year."

Up north, Drury and his neighbors are keeping a close eye on what they see and harvest and recognize that this sort of data collection is part of being in DMAP, he said.

"We're also going to continue to use observations from hunters this past fall," he said. "We reported what we saw each individual sitting, so he has more data. The more we do it based on trail camera pictures, sightings, the overall weight, all those types of things are going to help him help us manage that herd and get the right numbers in check."

It may be a while before his deer are under control to the point where Lanzotti can find a farmer interested in planting his 100 acres, but he believes that with the help of the additional permits granted under DMAP, things are heading in the right direction.

North Missouri property owner Mark Drury (above right) works with neighboring landowners to use DMAP to improve the area herd's doe-to-buck ratio.

"I'm appreciative of the fact that we have it and I think we are using it as a tool," he said. "Now we're just holding the line. If we didn't have DMAP as a tool, we would start to see populations get to a point where there would be habitat degradation occurring on our farm."

"It's been a great addition to the tools of management and without the right tools, it's hard to achieve the right outcomes."

Good Herds Make Good Neighbors

Bringing his herd into balance is the purpose of DMAP, but not its only benefit, Drury said.

"It has brought this neighborhood closer together in terms of our overall goals as managers, as friends, as neighbors," he said. "Not that we weren't close before — we all knew each other quite well — but this thing has created a bond between us where we have group texts going on during the deer season, and we're just having a blast with it."

"These guys are all like-minded. We want the best for the neighborhood, and we want the best for the resource. You know, we want a very healthy sustainable population of white-tailed deer." ▲

Larry Archer is Missouri Conservationist's associate editor.



YOUR SUMMER HIGHLIGHT REEL

FROM WALLEYE TO SMALLMOUTH AND
CATFISH, MISSOURI WATERS OFFER
ACTION YOU WON'T WANT TO MISS

by Tim Kjellesvik | photographs David Stoner



Summer is the season for big, Hollywood blockbusters. But did you know that Missouri has all the makings for your very own angling highlight reel? It's true! You just need to know where to go and the tactics to use once you get there. So, grab your rod, tacklebox, and a pair of sunglasses and get ready for the bright lights of your Show-Me State fishing highlight reel. Let's hit the water!

Award-Winning Walleye

An overlooked and sometimes underrated game fish in Missouri, walleye could quite possibly be the best table fare we have swimming in our deep, clear impoundments and spring-fed rivers. Walleye tend to have more recognition and pressure in northern states and Canada, but insiders know they're a hidden gem here in the Show-Me State.

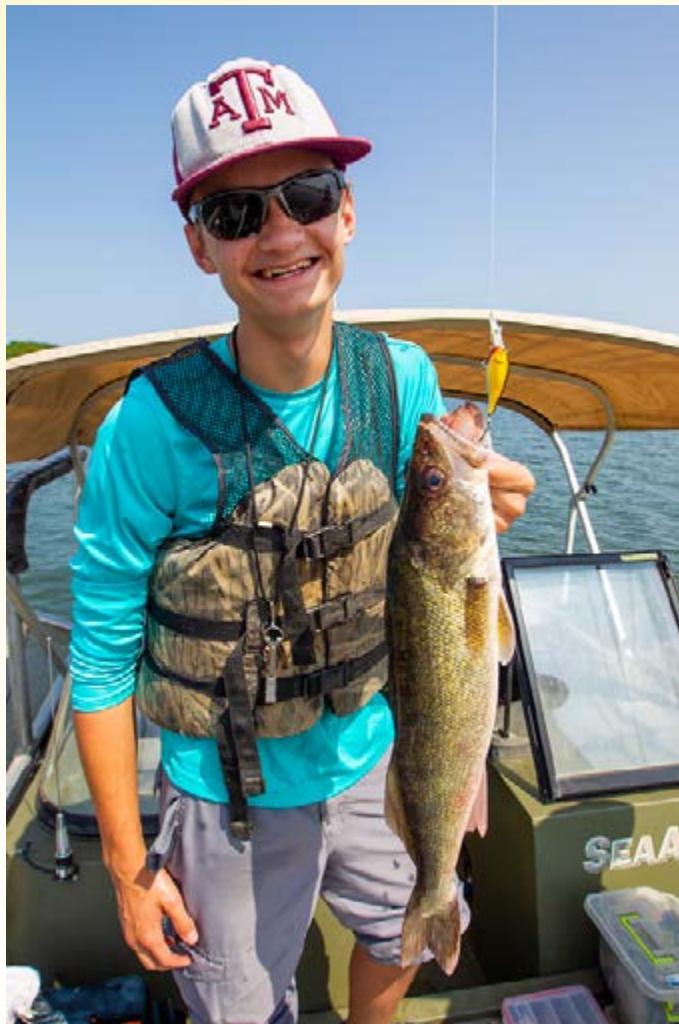
While not as splashy and boisterous once hooked as the beloved largemouth bass, walleye have a smooth, pulsing strength as they attempt to stay at depth and out of your net. They strike with surgical precision, removing a nightcrawler or minnow from a jig without touching the hook. They can follow a crankbait for an eternity attempting to make up their marble-eyed mind on whether to strike or not. During our hot Missouri summers, expect to find walleye relating to the thermocline in our lakes.

For any angler willing to hold a casting call for the camera-shy walleye, here are your best places and the best baits to make it happen.

Smithville Lake

Just north of the twinkling Kansas City lights, the Smithville Lake reservoir covers almost 7,200 acres and has received annual stockings of walleye. Smithville is gaining a reputation not only for numbers but for good-sized walleye, too.

During summer months, troll or cast crankbaits over structure along main lake points and flats, especially those getting hit by the wind. Crawler harnesses glammed up with spinners can be pulled along these areas, too. Experiment with trolling speed and



Surgical strikers,
walleyes are
notorious for their
light bite.



spinner colors to determine what the walleye are in the mood for at that particular time. Pay attention to your rods, as sometimes a hit comes in the form of an extra weight, not an explosive fight.

If trolling is too passive of a tactic for you, cast vertical jig spoons into standing timber or the mouths of coves near the main channel. If you have electronics aboard your boat, key in on balls of shad as often there will be a walleye lurking below waiting for stragglers.



Mozingo Lake

Stockton Lake

Known as a walleye destination in southwest Missouri, Stockton Lake, at almost 25,000 acres, is a must-fish on your summer highlight reel. An annual stocking program and strong recruitment means Stockton Lake boasts not only good numbers, but also good-sized fish, too.

During the heat of summer, bounce a jig tipped with a minnow or just half a nightcrawler along the bottom in 15 to 20 feet of water. If the bite is light and you're getting robbed of your bait, add a stinger hook to your jig.

If you're having trouble locating fish, or simply want to cover more water, a crawler harness with spinners is also a great option, especially on flats. You can also troll deep-diving crankbaits near the thermocline to hookup on suspended walleyes.

Mozingo Lake

Mozingo Lake is the walleye hotspot of northwestern Missouri, even though it's the smallest of the lakes on our summer highlight reel at just over 1,000 acres. Just because it's the smallest lake, doesn't mean it can't grow 'em big! If you're looking for giant walleyes in the 10-pound-plus range, point your spotlight here.

Find those monster walleyes by trolling or casting crankbaits over structure, along tapering points, points with the wind blowing into it. You can also pull crawler harnesses with spinners over these same areas with good success.

Weedlines serve as both protection and ambush spots for walleye. Find them and focus on boat control to run parallel with the outside edge and get ready to set the hook.



Toothy but tasty, be sure you can ice your catch down, or have a well-circulating live well to keep your catch fresh.



Summer Smallmouth Stardom

The undisputed star of our streams is the scrappy smallmouth bass. They'll hit like a ton of bricks and take off like they've got a chip on their shoulder. If you're looking for a fight and a heavy dose of action and adventure, you've come to the right place.

Though known for their fierce disposition, long, hot Missouri summers put smallmouth in a vulnerable position. Lowered oxygen content in the water and dropping river levels can make life tough. To keep our bronzebacks in good shape, keep the fight as short as possible. Keep them in the water while removing the hook and be quick with any pictures before releasing them. You might even choose to go with barbless hooks to free these fighters even faster. Also, be mindful of the unique regulations on the section of river you fish.

Gasconade River

Carving its way through 271 miles of Ozark Plateau country with the middle section fed by numerous springs, the Gasconade River is home to some highlight reel-worthy smallmouth fishing. Load up your boat or throw on some wet-wading clothes and get ready for a summertime blockbuster!

Find big smallies holding at the ends of pools and runs by throwing walk-the-dog-style topwater baits, like the classic Zara Spook. Wait until you feel the fish on your line, otherwise you might pull the bait right out of their mouth.

Go a little deeper in these same areas by burning tandem willow leaf spinner baits. These bold and brash offerings trigger explosive reaction strikes that require you stay frosty and ready to set the hook.

When the fish aren't as aggressive, go with lighter line on a spinning rig and finesse jigs with crawdad-looking trailers around boulders and through eddies. These hits may feel like solid thump, then hold on and get ready to steer that smallmouth away from the snags he'll likely run for.

Keep your smallmouth kit simple, especially if you're floating your way to them.



Big Piney

The Big Piney River runs 110 miles through south-central Missouri, ultimately joining up with the Gasconade River. While smallmouth can be found along its entirety, the Smallmouth Bass Special Management Area from the Slabtown access to the Gasconade is where some of the best angling can be experienced.

Boisterous top water prop baits run quickly through glides, runs, and riffles are often more than a smallmouth can stand. Pause and pop these baits around isolated cover to coax a smallie out of hiding. Use tube jigs in deeper eddies around boulders.

Elk River

Meandering 56 miles through southwestern Missouri, Oklahoma, and Arkansas, Elk River is further proof that smallmouth bass have good taste in where they live. The scenery is second only to the fishing.

If you're packing light for this trip, you could get by with a small tackle box of nothing but shaky head finesse worms. They're flat-out showstoppers for smallies on the Elk. But if you want a little diversity in your offerings and some incredible topwater action, try throwing buzzbaits through riffles and glides.

Weightless Super Flukes are another option, especially when algae blooms decrease visibility in the water. Dart these injured-minnow impersonators through glides, riffles, and deep pools.



Catfish Cameos

The summertime sleepers of the fishing world, catfish may not have the glamour and charm as walleye and smallmouth, but they run away with the award for cunning and sheer strength. With blues, channels, and flatheads on the marque, this summertime highlight reel is a triple-threat.

Smithville Lake

Smithville shows up a second time in our highlight reel, but this time, it's for whiskered reasons. If catfish are in your queue for a summertime smash, this lake is ready for a double feature.

For flatheads, look for standing timber in proximity to the channel. These brutes will come up from deeper water to feed, so be sure to use live bait like bluegills and keep them fresh and lively for maximum effectiveness. The rule for flatheads in general is that if you're not getting snagged, you're probably not fishing in the right place.

Find channel cats on flats, especially those with a gradual descent into the channel. Channel cats have a less discerning pallet and will take most any pungent-smelling offering, including cut bait. Channel cats can also be fished with good success on primary points.

Truman Reservoir

Situated in west-central Missouri, Truman Reservoir covers over 55,000 acres and is a must-see for anglers looking to connect on big blue cats. Use cut shad suspended above the bottom with a small float between the hook and the weight. Drift with the wind across open flats and when you hook up, drop the anchor, and get ready to catch some more.

If you plan on keeping any blues, be mindful of slot limits and any other special regulations that may apply.

Missouri River

From the Kansas state line to the Mississippi River, the Big Muddy is home to some absolute monster blues. Plan on beefing up your rod, reel, and line weight to take on these big river beasts.

Key in on shallow sandbars between wing dikes using cut bait for blues. These opportunists love gobbling down hunks of Asian carp and shad, too.

Also find blues and flatheads on the upstream of both wing and L dikes. Complex hydraulics near the bottom create a neutral current area allowing fish to easily feed on anything that passes by. Use cut bait for blues and live bait for flatheads.

One final word of caution when fishing for big cats: Never leave your rod unattended or it might get pulled into the river!

Missouri's rivers and lakes are home to world-class fishing, especially during the high temperatures of summer. Get in on the action and don't get left on the cutting room floor. Grab your gear and head out on location to start in on your highlight reel ... just be sure your drag is set right. ▲

Tim Kjellesvik is the editor-in-chief of DeerCast and is on a mission to help more people enjoy the outdoors.

Beef up your tackle if you're looking to land a summertime cat!

Get Outside in JUNE

→ Ways to connect with nature



Visit a Prairie!

Did you know June 4 is National Prairie Day? Missouri's native treeless grasslands are called prairies, and they host a variety of plants and animals. There are very few prairies left, although before European settlement, more than a third of the state was covered with them. Gray-headed coneflowers and purple coneflowers are just two of the native wildflowers blooming on prairies this time of year. For more information on prairies, visit short.mdc.mo.gov/Zts. To find a prairie near you, visit short.mdc.mo.gov/Z9o.



The Sights and Sounds of Summer

A sure sign that summer has arrived — fireflies begin to flicker in the night sky while annual cicadas begin to sing. Enjoy the show!

Leaving the Nest

Mama birds are preparing their young to leave the nest. Watch out for fledglings making their way into their new world. But look on from a safe distance and be sure not to disturb their progress. Chances are mama isn't too far and may swoop in if you bother her brood.



TANWI EMPEROR / CANITA DELMONT / SHUTTERSTOCK.COM

Natural Events to See This Month

Here's what's going on in the natural world.



American bullfrogs breed



Wild geranium (Crane's Bill) in bloom



Green sunfish spawning peaks

KANSAS CITY REGION

Happy Father's Day

Sunday • June 19 • 11 a.m.–4:30 p.m.

Lake City Shooting Range

28505 E. Truman Road, Buckner, MO 64016

No registration required. Call 816-249-3194 for more information.

As a special Father's Day gift, all dads get to shoot for free for today only.

It's Been a Long Day

June 21 marks the first day of summer, also known as the summer solstice. This day is also the longest day of the year, meaning it is the day with the longest period of sunlight. How will you spend these valuable, sun-filled hours? Go for a hike in the woods? Grab a pole and head to your favorite fishing spot? Dust off the binoculars and see how many different birds you can spot in one day? The options are endless. What will you discover?



White-tailed deer fawns are born



Tawny emperors fly



Your guide to all the unusual, unique, and unbelievable stuff that goes on in nature.



The creatures that inhabit Missouri are remarkable, diverse, and ... strange. It's a weird, wild world out there, and now you can learn all about it in MDC's new book, *Strange but True*. Adapted from the pages of MDC's award-winning children's magazine *Xplor*, this guidebook offers more than 350 fun facts about Missouri wildlife at its strangest.

→ Now available for purchase for \$8.95 online at mdcnatureshop.com or at MDC nature centers around the state.



Applicable tax, shipping, and handling costs apply.

MISSOURI DEPARTMENT OF CONSERVATION

Places to Go

OZARK REGION

Gist Ranch Conservation Area

The not quite wild west — but close

by Larry Archer

• Few places in Missouri spark memories of Hollywood's idea of the wild west, but Gist Ranch Conservation Area (CA) has guns and horses. "Ranch" is even in the name, and it's located in Texas County.

Gist Ranch CA's 11,240 acres includes multiuse trails and a shooting range that attract both horseback riders and shooters, said Piney River District Supervisor Randall Roy.

"The shooting range is probably the most popular feature for area users; Gist Ranch has a really nice range," Roy said. "There is a shotgun range, pistol range, 100-yard and 300-yard rifle range. So, the range gets a lot of use year-round, and then there's over 10 miles of horse trail, so the area sees a fair amount of equestrian use as well."

But if you're looking for wide open spaces and a "home-on-the-range" vibe, Gist isn't going to cut it. Roughly 96 percent of the area is woodland and forest, and while the open areas — the glades — make up just a small portion of the landscape, they're worth seeing, Roy said.

"My favorite part would be the glades, there are some really nice glades out there" he said. "But I'm a wildlife biologist who has managed glades my whole career, so I could be a little biased."



Purple milkweed

"In June, we have a lot of typical glade plants, coneflowers, big blue stem, Indian grass."

—Piney River District Supervisor
Randall Roy



Black-eyed Susan



GIST RANCH CONSERVATION AREA

consists of 11,240 acres in Texas County. From Summersville, take Highway 17 west 4 miles, then Route W south 3 miles, and then Ranch Road west 1.75 miles to the area. Another entrance road to the area is 5 miles west of Summersville on Highway 17.

37.2325, -91.7531

short.mdc.mo.gov/4oA 417-746-0291

WHAT TO DO WHEN YOU VISIT

-  **Archery** 16-target, walk-through archery range.
-  **Birdwatching** The eBird list of birds recorded at Gist Ranch CA is available at short.mdc.mo.gov/4on.
-  **Camping** Designated camping sites; individual campsites.
-  **Fishing** Black bass, catfish, sunfish.
-  **Hunting** Deer and turkey
Regulations are subject to annual changes. Refer to MDC's regulation page online at short.mdc.mo.gov/Zjw.
Also **quail, rabbit, and squirrel**
-  **Shooting Range** Unstaffed rifle and pistol range (25-, 50-, 100-, 300-yard targets); shotgun range.
-  **Trails** 10.6 miles of multiuse (hike/bike/equestrian) trail; 16.5 miles of improved/unimproved/service roads. Service roads open except firearms deer and spring turkey seasons.

WHAT TO LOOK FOR WHEN YOU VISIT



Wild turkey



Red-eyed vireo



Summer tanager



Carolina wren

Wild Guide



Eastern Kingbird

Tyrannus tyrannus

Status

Common summer resident

Size

Length: 8½ inches

Distribution

Statewide



Did You Know?

Eastern kingbirds were once referred to as bee-martins, based on the erroneous assumption they preyed on honeybees to their peril.

This bird's moniker — kingbird — is fitting for two different reasons. First, eastern kingbirds bear a reddish-orange crown on their heads that is often hard to see in the field. Second, kingbirds are known for their fearless physical attacks of other birds. They chase away crows and even hawks that venture into their territories, screaming and sometimes landing on them in flight, pecking fiercely on their backs. Their voice is a burst of chattering, high, sharp *kips*, *kitters*, and *tzeees*.



LIFE CYCLE

Eastern kingbirds arrive in Missouri in late April and begin building nests. Their nests — sturdy, thick-walled cups built of twigs, grass, and trash — are found in open areas with scattered trees and shrubs, often near water. They produce one brood a year. A clutch is two to five eggs, incubated in 14 to 17 days. The young fledge 16 to 17 days after hatching. Eastern kingbirds migrate in mid-August to early September to spend winters in South America.



FOODS

Like other flycatchers, kingbirds typically flit gracefully from an exposed perch to snap up flying insects and then immediately return to the same perch. The kingbird then bangs the insect on the branch, then swallows it. Bristly feathers by the bill funnel flying insects to the mouth. This bird eats some berries and other fruit in the summer but switches to a mostly fruit diet while in South America for the winter.



ECOSYSTEM CONNECTIONS

Kingbirds serve as a natural check on insect populations, helping control the numbers of a variety of insects. In their wintering grounds, eastern kingbirds travel in flocks, eating fruits and spreading the seeds of tropical açai or camu camu berries.

Outdoor Calendar

MISSOURI DEPARTMENT OF CONSERVATION



Free MO Hunting and MO Fishing Apps

MO Hunting makes it easy to buy permits, electronically notch them, and Telecheck your harvest. MO Fishing lets you buy permits, find great places to fish, and ID your catch. Get both in Android or iPhone platforms at short.mdc.mo.gov/Zi2.

FISHING

Black Bass

Impounded waters and non-Ozark streams:
Open all year

Most streams south of the Missouri River:

- ▶ Catch-and-Keep:
May 28, 2022–Feb. 28, 2023

Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2022

Nongame Fish Gigging

Impounded Waters, sunrise to sunset:
Feb. 16–Sept. 14, 2022

Streams and Impounded Waters,
sunrise to midnight:
Sept. 15, 2022–Feb. 15, 2023

Paddlefish

On the Mississippi River:
Sept. 15–Dec. 15, 2022

Trout Parks

State trout parks are open seven days a week
March 1 through Oct. 31.

Catch-and-Keep:
March 1–Oct. 31, 2022

Catch-and-Release:
Nov. 11, 2022–Feb. 13, 2023

*Only hunters selected through a random drawing
may participate in these hunting seasons.

For complete information about seasons, limits,
methods, and restrictions, consult the *Wildlife
Code of Missouri* at short.mdc.mo.gov/Zib.
Current hunting, trapping, and fishing regulation
booklets are available from local permit vendors
or online at short.mdc.mo.gov/ZZf.

HUNTING

Black Bear*

Oct. 17–26, 2022

Bullfrogs, Green Frogs

June 30 at sunset–Oct. 31, 2022

Coyote

Restrictions apply during April, spring turkey
season, and firearms deer season.

Open all year

Crow

Nov. 1, 2022–March 3, 2023

Deer

Archery:
Sept. 15–Nov. 11, 2022
Nov. 23, 2022–Jan. 15, 2023

Firearms:

- ▶ Early Youth Portion (ages 6–15):
Oct. 29–30, 2022
- ▶ November Portion:
Nov. 12–22, 2022
- ▶ Late Youth Portion (ages 6–15):
Nov. 25–27, 2022
- ▶ Antlerless Portion (open areas only):
Dec. 3–11, 2022
- ▶ Alternative Methods Portion:
Dec. 24, 2022–Jan. 3, 2023

Dove

Sept. 1–Nov. 29, 2022

Elk*

Archery:
Oct. 15–23, 2022

Firearms:
Dec. 10–18, 2022

Groundhog (Woodchuck)

May 9–Dec. 15, 2022

Pheasant

Youth (ages 6–15):

Oct. 29–30, 2022

Regular:

Nov. 1, 2022–Jan. 15, 2023

Quail

Youth (ages 6–15):

Oct. 29–30, 2022

Regular:

Nov. 1, 2022–Jan. 15, 2023

Rabbit

Oct. 1, 2022–Feb. 15, 2023

Sora, Virginia Rails

Sept. 1–Nov. 9, 2022

Squirrel

May 28, 2022–Feb. 15, 2023

Teal

Sept. 10–25, 2022

Turkey

Archery:

Sept. 15–Nov. 11, 2022

Nov. 23, 2022–Jan. 15, 2023

Firearms:

- ▶ Fall: Oct. 1–31, 2022

Waterfowl

See the Migratory Bird and Waterfowl
Hunting Digest or visit short.mdc.mo.gov/ZZx
for more information.

Wilson's (Common) Snipe

Sept. 1–Dec. 16, 2022

Woodcock

Oct. 15–Nov. 28, 2022



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Baby animals, like this white-tailed fawn, are trying to make their way in the wild this time of year. If you spot young on their own, admire them from a distance or take a quick picture. But always leave them alone. Mom is nearby and will be back soon. Remember, leave wildlife wild.

by Noppadol Paothong

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